

REMARKS

Claims 1-15, 18, 20 and 21 were pending and remain unchanged.

I. Withdrawn Rejections Under 35 U.S.C. § 102(b)

Applicants gratefully acknowledge the withdrawal of the previous claim rejections under 35 U.S.C. § 102(b) based on U.S. Patent Publication No. 2002/0114940 to Clemens et al. (“Clemens”).

II. Double Patenting Rejections

The previous provisional rejection of the pending claims on the ground of nonstatutory obviousness-type double patenting based on claims 1-21 of copending U.S. Application No. 10/918,268 in view of U.S. Patent No. 5,968,669 to Liu et al (“Liu”) has been repeated and maintained (Office Action, page 2).

With regard to currently pending claims 1-15, 18, 20 and 21, Applicants respectfully renew their ongoing request that this issue continue to be held in abeyance until the claims of the presently pending application have been otherwise found to be allowable. At that time, Applicants will offer to file a terminal disclaimer if appropriate.

III. Rejections Under 35 U.S.C. § 103(a)

Claims 1-15, 18, 20 and 21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Clemens in view of U.S. Patent No. Liu. Applicants respectfully traverse.

First, Applicants are grateful for the clarification provided in the Interview of March 4, 2011 between the outgoing Examiner Alicia Chevalier and Applicants' representative Rachel J. Lin.

Next, Applicants renew their assertion that the combination of Clemens and Liu does not teach or suggest the limitations of independent claims 1 and 15, or of the claims that depend therefrom.

As an initial matter, Applicants note that Clemens is directed to a coating system comprising: (1) an asphalt-based basecoat; and (2) a thermoplastic powder coating topcoat overlying the base coat (Clemens, Abstract). That is, the system of Clemens contains **two separate coats**; specifically, (1) an asphalt-based “basecoat” (Clemens, Abstract; paragraphs [0010]-[0019]); on top of which is (2) a “thermoplastic powder coating topcoat” (Clemens, Abstract; paragraphs [0020]-[0029]). A careful review of Clemens reveals that first, Clemens makes it clear that these two coats are separate and distinct features; and second, that neither this “basecoat” nor this “topcoat” exhibits each and every element of the compositions of the present invention.

An important feature of the coating composition of Clemens is that its “basecoat” *consists essentially of “between 10 and 90% of a petroleum asphalt”* (Clemens, Abstract, emphasis added). That is, Clemens is directed to an **asphaltic coating system**. It is clear that the “basecoat” of Clemens does not correspond to the top coating compositions of the present claims for at least this reason.

Next, the “topcoat” of Clemens does not include a “cured mixture” or a “cured reaction product” as recited in independent claims 1 and 15. In the Interview with Applicants' representative, the Examiner indicated that the claims might be allowable if the independent

claims were amended to further describe the physical attributes of the coating as indicated by the term “cured.” However, Applicants respectfully submit that such amendment is not necessary, as the term “cured” in polymer chemistry is well-known and understood to one of ordinary skill in the art. The terms “cure” and “curing” in polymer chemistry is well-known to one of ordinary skill in the art as “a process by which liquid reactive polymers of low molecular weight (oligomers) are irreversibly converted into solid, insoluble, and infusible three-dimensional polymers” (The Free Online Dictionary (2011), available at <http://encyclopedia2.thefreedictionary.com/Curing+of+Polymers>). Therefore, one of ordinary skill in the art would know that the terms “a cured mixture” in independent claim 1 and “a cured reaction product” in independent claim 15 refer to a hardened surface as the topcoat. This is in contrast to the “powder product” and “finished powder” that constitutes the topcoat of Clemens (*see, e.g.*, Clemens, paragraphs [0235]-[0238] and [0256]).

The Office Action alleges that Clemens teaches that both its “topcoat” and “basecoat” teach “a cured resin” (Office Action, page 3). The Office Action cites Clemens, paragraph [0169] for this proposition.

However, Applicants respectfully submit that paragraph [0169] of Clemens merely indicates that the basecoat can be treated with an additional antioxidant that “protect[s] the cured resin from thermal decomposition, upon exposure to the flame applied topcoat” (Clemens, paragraph [0169]) – that is, the basecoat can be protected from thermal decomposition that may be caused by its contact with the topcoat. This paragraph does not describe any feature of the topcoat as being or including a cured resin. A skilled artisan would know, upon viewing the disclosure of Clemens, that its topcoat is clearly not cured.

This is consistent with the fact that the portion cited in the Office Action is in fact describing the basecoat of Clemens, not the topcoat. A review of Clemens reveals that paragraphs [0151]-[0229] discuss the basecoat (starting from paragraph [0151], which reads “Description of Preferred Manufacture, Materials, and Composition Ranges for Basecoat” and paragraph [0152], which reads, “Manufacture – Basecoat”). The description of the topcoat does not begin until paragraph [0230] of Clemens (entitled, “Description of Preferred Manufacture, Materials, and Composition Ranges for Topcoat”).

In sum, the citation of paragraph [0169] of Clemens in the Office Action does not teach or suggest a topcoat that includes a “cured mixture of a polymeric binder, heat expandable graphite particles, a polymeric carrier and an effective amount of titanium dioxide as a pigment,” (independent claim 1), or a “cured reaction product of a polymeric binder, heat expandable graphite particles, a polymeric carrier and 5.0% to 14.0% titanium dioxide as a pigment” (independent claim 15).

Nor do the teachings of Liu cure the defects of Clemens. A prior art reference must be considered in its entirety, *i.e.*, as a whole, including portions that would lead away from the claimed invention. *See W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984); MPEP § 21410.02. The Office Action alleges that Liu teaches that heat expandable graphite is known in the art to provide flame resistance (*see* Office Action page 3, referencing the Final Office Action mailed January 5, 2010, pages 7-9, paragraph 7). However, an attempt to combine a graphite (such as that alleged to be taught by Liu) with a powder topcoat of Clemens would fail, as the graphite would be unable to expand within the powder coating. An attempt to combine a graphite of Liu with a basecoat of Clemens would also fail, at least for the reason that the resultant coating composition would not

be a top coat as the present claims recite. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (CCPA 1959) (obviousness cannot be established where a “suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate.” *Id.* at 813, 123 U.S.P.Q. at 352).

Therefore, for at least the above reasons, Applicants respectfully submit that the rejection of claims 1-15, 18, 20 and 21 under 35 U.S.C. § 103(a) has been overcome, and should be withdrawn.

In view of the above remarks, Applicants believe that each of the pending claims is in condition for allowance, early notice of which is earnestly solicited. Should any outstanding issues remain, the Examiner is invited to contact Applicants’ undersigned attorneys at the telephone number below.

The Director is hereby authorized to charge any fees that may be associated with this filing, or credit any overpayments, to Deposit Account No. 03-1250, Reference No. FDN-2799, Customer No. 43,309.

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By: /Rachel J. Lin/
Rachel J. Lin
Reg. No. 51,098
Sills Cummis & Gross P.C.
One Rockefeller Plaza
New York, New York 10020
Telephone: (212) 643-7000
Facsimile: (212) 643-6500
Attorneys for Applicants